Wisconsin
Department of Commerce

Approval # 980096-U

Safety & Buildings Division
201 West Washington Avenue
P.O. Box 2689
Madison, WI 53701-2689

Wisconsin
Material Approval

Material: T-NDE Four Part Assessment(FPA) Method

Manufacturer:
Tanknology-NDE
8900 Shoal Creek
Bldg.200
Austin, TX 78757

SCOPE OF EVALUATION

The Tanknology-NDE Four part assessment method was evaluated for use in an evaluation conducted in accordance with ASTM ES-40 to assess tanks for corrosion holes prior to upgrading with cathodic protection in accordance with **s. ILHR 10.52 (2)(b) 4.**

DESCRIPTION AND USE

The Tanknology-NDE FPA Method is a non-invasive procedure for the assessment of buried steel tanks prior to the addition of cathodic protection.

Non invasive evaluations conducted under ASTM ES-40 in accordance with **s. ILHR 10.52 (2)(b) 4.** Include the following phases:

Phase I - A Vacutect precision test is performed by an independent third-party to determine through a precision test that the tank is not leaking prior to upgrade.

Phase II - A corrosion survey is performed on each site by properly trained and managed personnel.

Phase III –An internal inspection of the underground storage tank is conducted using a Tanknology-NDE petroscope.

Phase IV – A final review of the corrosion survey and petroscope is made by a National Association of Corrosion Engineers(NACE) certified corrosion specialist who makes the final determination regarding the UST's suitability for cathodic protection upgrade.

TESTS AND RESULTS

The Tanknology-NDE method was evaluated by an independent third party and was found to meet the criteria provided in ASTM ES 40-94 as added to and amended by the EPA/OUST Guidance Memorandum dated July 25, 1997 and requirements imposed by the department.

LIMITATIONS OF APPROVAL

It should be noted that ASTM ES-40 does not apply to piping. Approved use of the Tanknology-NDE Method is limited to the evaluation of tanks.

This Material Approval is related only to the acceptability of the Tanknology-NDE Method, as a "tool" needed under the ASTM ES-40 standard. The appropriate application of all aspects of the ASTM ES-40 standard will be subject to review and approval by the department for each tank that is evaluated for upgrading.

In applying the ASTM ES-40 standard, the following additional requirements shall be observed:

Pre-Petroscope video assessment cleaning of UST must be conducted under the oversight and the responsibility of Tanknology NDE.

Phase I (ES-40-8.1) precision tightness testing methodologies must maintain Wisconsin Department of Commerce Material Approval. The precision test shall be a test conducted no more than 4 months previous to the completion of phase Two assessment procedures and shall include the piping. SIR tightness assessment methodology may not be used to demonstrate tightness.

A site assessment shall be required if the visual inspection reveals holes or rust plugs. The assessment and the final report shall include an evaluation for the presence of hydrocarbons in the soil samples. (Refer to Wisconsin Department of Natural Resources Administrative Code

NR 720 and WDNR document PUBL – SW 130 93) The assessment results shall be included in the plan review application submitted under **s. ILHR 10.10.**

The following items must be included in the assessment: the Petroscope suitability report which includes: facility and UST background information, detailed sketch reflecting sampling locations, soil resistivity, soil potentials, electrical continuity between tanks, pipes and other underground structures, groundwater level, soil pH, soil moisture, soil type, potential for stray current interference.

Tanks that are within the conditional probability window must be determined to be suitable for upgrade by another approved method such as the NLPA Standard 632 Internal Inspection of Steel Tanks For Upgrading With Cathodic Protection Without Lining. This method must incorporate the use of ultra-sound assessment.

The Department shall be notified of tank systems that do not qualify for cathodic protection upgrade using the ES-40 or NLPA Standard 632 assessment.

Upgraded tanks shall be monitored for releases every 30 days in accordance with one of the methods listed in **s. ILHR 10.61(4) to (8)** and approved in accordance with **s. ILHR 10.125**.

The corrosion protection upgrade of the UST system shall commence no later than 6 months after the completion of the assessment.

Six months after the installation of cathodic protection, a precision test shall be conducted with a method meeting the requirements of **s. ILHR 10.61(3)** and approved in accordance with **s. ILHR 10.125**.

All provisions of **Chapter ILHR 10** including the plan submittal requirements of **s. ILHR 10.10** and any other requirements the Department specifies in accordance with **s. ILHR 10.52** must also be complied with.

This approval will be valid through December 31, 2003, unless modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Reviewed by: _____

Approval Date: _____ By: _____

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